THE URBAN SETTING

Man's Need For Open Space

A Symposium at Connecticut College, New London, Connecticut
March 28 - 29, 1980

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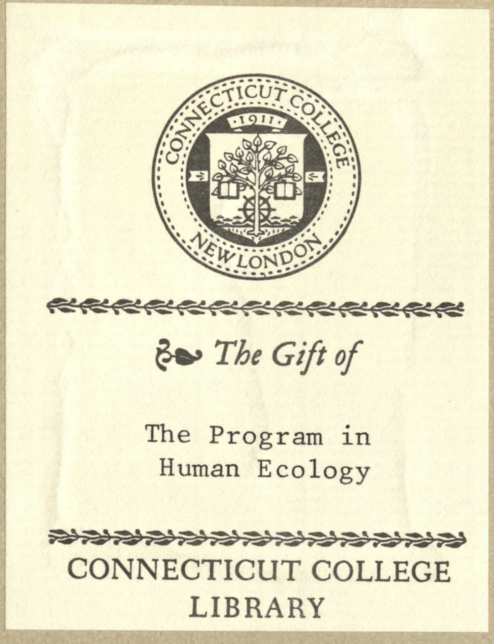

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Portions of this article have previously appeared in print.

FOREWORD

The symposium held at Connecticut College March 28-29, 1980 brought together leaders in state, regional and local organizations who have responsibility for planning and management of Connecticut open spaces and academicians whose research interests are the interaction of people with open spaces.

The meeting was sponsored by the Human Ecology Program and the Connecticut Arboretum at Connecticut College, funded by the Andrew W. Mellon Foundation, and organized by Miss Janet Wilscam, a senior student, as part of her graduation requirement. Invited participants included students of area colleges and universities as well as state legislators, local and regional government leaders, members of land trusts, conservation commissions, the U.S. Soil Conservation Service, and science centers.

The keynote address by Dr. Hugh Iltis stressed the genetic evolution of man within an outdoor setting, and the necessity of open space near urban areas for the better health, mental and physical, of the public. Succeeding speakers discussed planning and management of open spaces near urban centers. Since Connecticut is a small state with concentrations of population in urban areas, all public spaces are within relatively easy reach of the citizenry, and the topics addressed are of real importance in the planning and management of open space.

Our hope is that the papers included here may be of value to other localities in their consideration of open space in and near urban areas. Several of the papers here presented have appeared elsewhere in different form, as noted.

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Janet Wilscam, Human Ecology Program, Connecticut College, 1980

Why Man Needs Open Space

THE BASIC OPTIMUM HUMAN ENVIRONMENT: HUMAN ECOLOGY

Dr. Hugh Iltis

Involvement with nature, a nearly universal trait among both primitive and civilized peoples, may be in part genetically determined; human needs for natural diversity and beauty must be inherent. Man's love for natural colors, patterns and harmonies, his preference for forest-grassland ecotones which he recreates wherever he settles, must be the result to a large degree of Darwinian natural selection through eons of mammalian and anthropoid evolutionary time and even through the ten millenia of human agricultural history. Our eyes and ears, noses, brains, and bodies have all been shaped by nature.

Would it not then be indeed incredible if savannas and forest groves, flowers and animals, the multiplicity of environmental components to which our bodies were originally shaped were not still important to us? Would not such a concept of nature be a major part of what we might call a basic optimum human environment?

Preserving Optimum Environments

One could elaborate this insight in a thousand obvious as well as more subtle ways: yes, air to breathe, water to drink, plants and animals to hunt and eat, sounds to hear, images to see, textures to touch, land to wander on. Does not spring, with sprouting meadows and flowering trees stimulate joy? Do not then lovers go courting in the country, flowers in hand, sensitive as never before to the feel of the awakening, growing land, to every odor of blossom, intoxicated with the dark, demonic urges to dance, to touch, to mate close to the earth? And do not boys and girls fish, men hunt and fight, both men and women garden? Do we not, if we have money, build swimming pools or greenhouses, or second homes in the mountains? Do we not stream out of our cities by the millions to camp in nature every spring and summer? Do we not, if we have a choice, keep pet dogs, cats, or fish, *Cyclamen, Primula or Begonia,* and flickering fireplaces to alleviate our miserably cold northern winters, as ethnological fragments — almost symbolic bits — of that ancestral ecosystem which shaped our physical needs and subconscious desires? Could this also be the reason why some of us get seduced by surrogate plastic flowers or plastic trees? Is it to satisfy such basic, innate needs that we wish to keep in touch with nature? If there is a biologically valid concept of a basic optimum environment for mankind, would it not have to include much real nature? Is not this optimum human environment definable in its essence as a compromise containing maximum contact with nature without giving up all the advantages of culture and civilization? Would not human needs for this nature contact be of different intensity and quality for different ontogenetic stages: water, mud for babies, shrubs to hide behind for six-year-olds, fields to dig in and grass to sleep on for adolescents and adults? How long since we left the savannas? the tribes? the villages? Surely not long enough for all of us to have lost all need for their natural settings.

Here, finally, is an argument for nature preservation free of purely utilitarian considerations; not just clean air because polluted air gives cancer; not just pure water because polluted water kills the fish we might like to catch; not just saving plants or ducks because they could be useful or edible; but preservation of the natural ecosystem to give body and soul a chance to function in the way they were selected to function in their original phylogenetic home. The ultimate argument for nature preservation, as well as for landscape architecture or urban planning, rests squarely on evolutionary principles.

Urbanization Forces Adaptive Change

I believe that the optimum environment of any organism, whether man, grasshopper, water lily or amoeba, is the environment in which it evolved. Most of us city dwellers live in a human environment which is but a few thousand years old. Today about fifty per cent of the world population lives in towns. Many of these people live in metropolises which are not optimum environments by any stretch of the imagination. In them they are like wild colts which evolved to roam the steppes but are tethered in a dark cave. Unlike rapid cultural evolution, psychological and physical evolution is an immensely slow process in which a hundred and sixty years (eight sexual generations) will produce at best only the most minute and imperceptible changes in our basic adaptations.

Today, we are still evolving; perhaps even more rapidly since the industrial-urban revolution, in response to urban selection pressures. But whither, and to what final fate no one can say. Perhaps in twenty thousand years we may evolve into a half-blind, half-deaf *Homo sapiens* subspecies, *post-sapiens,* composed of environmental morons programmed to tolerate pollution, noise and ugliness, and perhaps allergic to the confusing diversity of natural conditions. But today we are still a part of *Homo s. sapiens,* a subspecies with strong genetic needs for the natural environment, whose members try at every turn to find nature surrogates, from air-conditioned humidified domociles to aquaria with fish, to plastic trees designed by well-meaning landscape architects.

Clearly, the finest human and artistic attributes of even the most civilized man and culture have their roots in nature. Judging from the intensity of man's feelings and his search for substitutes we may yet preserve these roots and their substrate as the basis of his humanity. The substitutes we find for our original habitats are legion, and many *are* important and satisfying. Clearly, we cannot all go back to the African savannas, for there are too many of us! And even if we could we would not want to — for most of us may have lost the ability to live and hunt like cavemen. Yet if we wish to experience a highly optimal physiological-psychological environment, we must retain the option of replicating the environment of our ancestors tens of thousands of years ago. And that means a return to biotic diversity and adventure, reaching from the simplicity of a colorful flower garden all the way to the unmanipulated, undepleted complexity of a wilderness. Above all, it means the opportunity for intimate sensory contact with natural beauty, both cultivated and wild. We do need well-kept colorful gardens as we do fields of grain and fiber. But to me, in terms of sensory contact, these are only special substitutes for wild land, with crucial yet limited functions and usually with low diversity.

Today, for the sake of diversity, we have even more urgent reasons to preserve the many, many species of plants and animals which cannot be grown in gardens or maintained and reproduced in zoos. Except for a few domesticated species, this can *only* be done by protecting their original wild habitat, by preserving the very special ecosystem to which each species is adapted and of which it is a part. But today it is not enough to pay homage to human love for nature, nor to art's dependence on nature, but rather high time to press for experimental proof and scientific understanding of the *why* and the *how*, and thus furnish the factual scientific-mechanistic bases and arguments for the deliberate preservation of the natural environment.

Human needs for nature surely cannot be disputed. Because we evolved in it, this, the biosphere, is the best of all possible worlds for us; and if we lose it, or pieces of it, no one can predict the consequences. However, these cannot, in the long run, be good. Just to look at our urban problems is to glimpse a dark, hellish future.

It is common knowledge that denatured human environments produce denatured (i.e. unnatural) humans. This is demonstrated over and over again in our crowded inner cities. It may be, as many technological optimists defending larger populations have hopefully repeated, that crowding alone, isolated from any concomitant side effects, exerts no particularly bad sociological influence on most people. But if so why then, are so many of the most terrible modern human problems endemic to the crowded urban centers? If the cause is not crowding directly, perhaps it is crowding indirectly. Perhaps intense crowding, which results in the destruction of all complex biological ecosystems, indirectly deprives man of a whole battery of inherited needs which can be satisfied easily and well only by nature. To put it another way, since crowded places tend to be denatured,wouldn't this seem to support the ideas presented here: Namely that humans cannot live very well without the biological diversity of nature, and especially without the beauty and pattern of plants to view, to explore, to be stimulated by.

Maintaining Human Ecosystems

This is why we need so many nature preserves whether small scientific areas and country parks or giant wilderness areas of immense size; because there are so many species and ecosystems to be protected. This is why we need international agreements on animals and ecosystems, subsidies and concerted efforts for the preservation of the tropics and the oceans on a scale as yet hard to imagine. This is why every citizen must be passionately committed to the establishment and protection of biotic preserves of whatever size. In arguing for preservation of nature, the diversity of wilderness is not the only concern today. We need to preserve *human* ecosystems showing high diversity, stability and natural beauty. Thus apple or peach orchards, vegetable plots and fields of specialty crops such as artichokes, or small, low-yielding but diverse farms on the outskirts of cities are all agricultural communities, essentially ecotonal in character, combining forest and grassland into a kind of anthropogenic savanna of great aesthetic and ecological value. Such small farms with many kinds of crops and groves of trees are quite stable. Now much of such land is being deliberately subdivided in the name of growth and profit or developed and destroyed in the name of progress. Planners, especially, need to explain to the public the elusive meaning of this loss to man and offer them viable alternatives: statutory limits to the growth of suburbia, the benefits of good zoning, with changes in taxation structure to allow farming next to apartment houses and above all, a deliberate policy of restraint on growth and on making money out of the selling of land.

Human Needs Linked to Natural Diversity

The general malaise of mankind, especially of Western civilization, would make it appear that urban humanity has become the unhappy involuntary guinea pig of a giant experiment in sensory deprivation in which the crowded cities are our cages. Increasingly, a larger proportion of mankind is suffering from the inexorable, cumulative acceleration of technology and the loss of the experimental variable in nature. No one force is exclusively to blame — not technology *per se*, not capitalism, nor overpopulation. But the syndrome is such that no one is exempt from the effects. While we have reached much higher material standards of living and a longer life expectancy, there are other basic measures of an optimum environment; measures which would make it appear that we are reaping the synergistic effects of sensory deprivation on a gigantic scale.

Examples of a gradual collapse of social structure and of a biological incoherence are legion, including crowding, pollution, and the unbearable, continuous roaring noises of the large city. Significantly, recent research has shown mental disease to be twice as high in New York City as in rural northern Illinois; a not unexpected conclusion. If we even cursorily analyze the difference between these two habitats of man, New York City and northern rural Illinois, we find that in addition to the *lack* of noise, pollution and crowding in the latter area, there is the *presence* of beautiful green plants, all combined into an infinitely varied landscape. Could it be that the stimuli of non-human living diversity makes the difference between sanity and madness? If so, is it not about time to find out why? Is it not finally time for experimental psychologists, human ethologists, and landscape architects and urban planners to get together and design experiments, scientifically indisputable and clinically impeccable, which would give us insights into how the brain of the human animal reacts to natural diversity, to natural beauty, to technological sterility: What exactly happens when we look at the symmetrical pattern of a leaf or smell the odor of a brilliant flower? With modern electroencephalogram (EEG) equipment and a little imagination, it would be rather easy to design experiments, using a diversity of groups of different ages with diverse social and ecological backgrounds; comparing children with adults, farm youngsters with high rise apartment dwellers, the emotionally healthy and the mentally sick. Hardly anything is known about the way we neurologically relate to our surroundings. Could it be that we don't want to know? That if the truth were out, many of the powers that be would then be forced to stop making a desert out of the green earth?

The truth of the matter is that hardly anyone has bothered to think about the connection between the alarm of the preservationists, the social pathology of the cities, and the overwhelming ignorance regarding human needs in general for the aesthetics of nature. There have indeed been no efforts made to establish in a scientific way just how this interrelationship functions. Yet wise men since time immemorial have subjectively sensed the important relationship of human happiness to natural conditions and incorporated it into ethics and religion. And artists have had it in their bones since the beginnings of recorded cultural time in the torchlit caves of Lascaux. I realize that civilization produces its own unique brands of diversity. But especially compelling and significant for man, I feel, must be the incredibly rich diversity of the 400,000 species of plants and four million or more species of animals which combine and recombine endlessly into a vast array of variable biotic communities. From all indications, this visual natural diversity is especially meaningful to man (witness how at the earliest ontogenetic stages children compulsively search for it). It is well to stand in awe before this variability, which is of a magnitude technology cannot reproduce.

Homogenization Threatens Our Future

Will mankind have enough sense to preserve the complexity and diversity of nature? The current rate of heedless homogenization of the world's once diverse environments is not encouraging. The transformation of *natural* diversity into cornfields, cow pastures and concrete cities the world over appears almost inevitable. Growth of both population and of technology implies bigger and grimmer megalopolises. It condemns future generations to becoming permanently locked into denatured, polluted environments. If we value human intelligence, its superb sensitivities and deep emotions towards nature, and the happiness which flows from it, we had better begin to value more highly the natural diversity which still happens to exist and preserve it. For I believe, by whatever route we approach the modern human problem the answer is always the same: Preserve nature, for it is sacred to humanity and its evolution.

The Social Need for Open Space

THE SOCIAL MEANINGS OF FORESTS

William R. Burch, Jr.

Forests have always had important economic meanings for us. In order to endure as a species, we have chopped, burned, uprooted, trapped in, dammed near, and otherwise converted the elements of the forest ecosystem to our survival needs. Yet only the accountancy system mentality of the industrial society has thought that the sole meaning of a forest is to be found in counting: so many kilos of fiber, so many BTUs of energy, so many acres of wilderness, so many recreation visits. In other times and places people have sensed a more mysterious, complex, subtle, and intimate relationship between the life of the forest and the life of human society.

Forests have played a determining as well as an adaptive part in human history. The emergence of *Homo sapiens* is traced to the time our primate ancestors left the forest for the savannah. Among tribal peoples, those of the forests have patterns of culture and social organization distinctive from peoples of the valleys, plains, or seashore. Ralph Rowlett reports how the emergence of forests inhibited migration from the eastern steppes of Europe and therefore significantly altered Iron Age development patterns in southern and northern regions of Europe. Certainly the great forests of eastern North America significantly influenced the patterns of European invasion and colonization and ultimately the kinds of regional political economies that emerged in the various ecosystems of our continent.

The social meanings of forests have been many and varied. I will narrow my attention to four: (1) forests as personal and social metaphors; (2) forests as locales for managing potentially threatening social aggregates; (3) forests as stimuli and foci for larger social movements; and (4) forests as settings where certain intergroup bonds may be established and sustained. I will conclude by exploring how the sustained-yield management of forests may have more to do with social history than with biologically based technical practices.

Personal and Social Interpretations

Preliterate peoples see forests as places of spiritual and moral redemption. Certain trees and locations are seen as sacred repositories for gods of light and darkness. The explanation of such metaphorical excursions is that the spirits who dwell in the forest can be used to coerce those who might deviate from society's norms. Of equal importance, myths that explain why certain things are done in certain ways are given tangible credence in the giant sacred tree or hidden sacred glen. The existence of the sacred tree or glen reinforces the expected patterns of behavior.

Literate societies may have higher material standards and more sophisticated cultural norms, but their poets continue to find spiritual and moral redemption in the forest, while many a nature lover reports spiritual revelation in the presence of a particular tree or ancient forest grove. Wordsworth musing on the vernal grove or the latest Sierra Club coffee-table book contemplating the beauty of nature share the vision that an individual needs contact with nature to become spiritually renewed, to improve mental and physical well-being, and to discover the sources of true humanity. The naturalist literature, however, seems to alternate between seeing the forest setting as a gentle mother who provides a peaceful bower in which to escape the pressures of society or as a stern father who provides a severe testing of the individual's skills, fortitude, and aliveness.

There has been little systematic testing as to whether the forest experience actually produces the spiritual and psychological advantages or the sense of personal reintegration claimed for it; or whether some other setting could as likely provide the same gains. Nevertheless, it seems that, for those who do believe that such transformation occurs, it very likely does. Certainly there would be far fewer parks, forests, and nature and wildlife preserves if a significant number of people were not firmly convinced that exposure to natural settings has positive benefits for individual and social well-being.

Locales for Managing Potentially Disruptive Populations

Forests affect social patterns in another way — by providing places to house temporarily society's potentially disruptive populations. Wood-producing regions tend to have unbalanced, demographic patterns with a high proportion of mobile, young, unattached males. In the early settlement of North America, logging camps may have been a much more significant *safety valve* than the agrarian frontier favored by Frederick Jackson Turner's thesis. Logging camps gave individuals without capital, land, or families a place to start. Indeed, the story of North American logging is the story of certain groups'

immigration. French, Swedish, and Norwegian waves of immigrants coincided with the exploitation of the forest — first in the mountains of the East, then in the Great Lakes region, and later in the Pacific Northwest.

In the Great Depression, the United States, like other industrial societies, discovered the virtues of conservation and forestry. In 1933 the Civilian Conservation Corps was formed to provide single, young, male volunteers with "useful work and vocational training". The life was hard. If those young men had families on relief, most of their base pay went to their families, while they were regularly isolated from urban excitements and subjected to military-type control. Most reports on the program have been enthusiastic about its benefits for the individuals involved; and certainly the United States has coasted upon the forest and park facilities established in that era. At the peak of the program in 1935 over five hundred thousand young men were located in more than two thousand six hundred camps. Such figures compel one to ponder the kind of public tranquility and peace that would have prevailed if this mass of young men had remained at home in already troubled urban places. However, the enthusiasm for conservation and forestry has seldom been able to overcome other social priorities. The United States CCC program was terminated in 1942, when World War II began to absorb unattached young males. In recent years forest areas, forestry work, and wilderness trips have been seen as places and activities for therapeutic work with delinquent male adolescents. Interestingly, if one follows over time the various theories about the social benefits of exposure to forest settings, they all seem to have a remarkable similarity to a given historical period's prevailing theories of social manipulation. For example, my associates and I have abstracted findings from more than two hundred studies of camp and nature programs for young people, which extend from the early 1900s to 1972. These studies were either predominantly quantitative or qualitative. The attitude of the qualitative studies (most of which were written by teachers and camp counselors) seemed to reflect clearly the goals and techniques found in contemporary theories of industrial management. Thus, in the period up to the 1930s, camp management stressed a finely structured program with a motivation system, and made the physical health and well-being of the camper a primary concern. This pattern reflected the *scientific management* (time and motion studies) approach dominating industrial management prior to the 1930s. In the 1930s there is the shift in *progressive* camps to more concern with managing the campers' experiences. This is similar to the contemporary *human relations* (Western Electric studies) approach to industrial management. The more recent cooperative camps in which the campers make decisions as a group seem to echo a concern with decision processes basic to the recent *decision theory* (industrial democracy) in industrial management.

We actually have no final answer to whether forest settings have the therapeutic value attributed to them. Perhaps the summer camps promising bold, new and confident products from the wilderness setting could be effectively located in urban slums. We do not like to think so. But even studies of our modern CCC program - the Youth Conservation Corps - suggest that the benefits gained from the forest experience are mostly due to a youth's middle class background.

Seedbeds of Social Change

A third social function of forests may be their role in stimulating social movements that ultimately create larger social changes. Primary producing regions have long served as the locus for radical change. It is a moot point as to whether such regions attract or produce their malcontents. Still, pulpwood cutters, loggers, miners, and other isolated working groups seem to have more innovative and independent unions, make the strongest demands, and are most likely to use violence to achieve their goals. One suspects that even the most totalitarian political economy or the most generous welfare society will not suppress such independence for long. Studies of the environmental movement in the United States suggest that participation in forest recreation may have led to larger concerns for clean air, water, and humane urban places. If this holds, then the increased use of forest recreation areas is likely to mean even more environmental activism in the future. The larger significance of the tendency toward more radical world views is that human societies use culture as their primary adaptive mechanism; yet like all such mechanisms, culture can become maladaptive. That is, solutions tend to be suggested because they have been established in the past and because various vested interests have a survival stake in seeing that such solutions continue. Thus the survival needs of a given society always require some locale or means for mutant solutions and ideas to emerge and ultimately to challenge the established normative pattern. The people who work and those who recreate in forested regions may be important sources for such social changes.

Our forest regions exist on the edge of our industrial and consumption-driven political economy. Culturally they are relics of those social values and orders found in the early primary production stages of our national life. Yet their resources and activities are the ultimate base of any society. Consequently, the voting patterns of these regions may function as early signals regarding impending adjustments facing the nation at large. Certainly the emotional force of of the *wilderness idea* seems to have generated expenditures of money, talk, and energy far beyond the actual requirements of the tiny handful of persons who actually use such locales. Natural environments have a symbolic power we have only partially examined.

Finally, forests seem to play a unique role in providing leisure settings where the social bond is established and maintained. In our analysis of the studies on youth camping we found that the hoped-for gains in school work and nature appreciation seldom occurred. On the other

hand, there was often a significant association between the camp experience and a gain in some social dimension such as a sense of belonging or an increased ability to work with others. In three experimental studies where urban children were exposed to forest settings, we also found that improvements in peer bonding were the only significant gains. Ruth Allen's study of six nature programs found that the one leisure setting where teen and preteen children consistently participate with their parents is in forests and parks.[1] Over the past two decades studies have consistently reported that the primary unit in parks and other forested recreation settings is a social group. This holds whether the recreation unit penetrates deep into the wilderness or visits a local park. People seldom go to a forested area alone. Depending upon the study that one consults, ninety to ninety-eight percent of the persons recreating in forest areas have come with groups of kin or friends. The large proportion of kinship units of mixed gender and age means that forests are one of the few places shared by such groups in urban-industrial societies.

There are also indications that such leisure experiences enhance bonding between generations as well as between men and women. A study of park visitors by Neil Cheek and me shows considerable equality of leadership, regardless of age or gender, considerable continuity of membership in the group, and freely chosen activities with little sense of social coercion.[2] The importance of these findings and hypotheses is their suggestion that a sizeable proportion of industrial populations use forests as locales for building or reaffirming key social bonds. Further, since most other leisure locales (including the home) tend to be age and gender segregated, forest settings may play an especially unique role in sustaining the primary social units of any society. If this unique role does prove to be the case, then forest settings provide a noneconomic value that is far greater than usually indicated by a simple count of the frequency of visits to forest locales. This excursion into the social meanings of forests emphasizes that the noneconomic and nonbiological dimensions of forest are of eminent practicality, permitting the long-run adaptation, stability, and survival of society. And although such utility may not show up on a corporate balance sheet or the bottom line of the econometrician, one hopes that the survival of our society is the ultimate goal of their efforts.

Forests and social life are intertwined. Forests are settings where important personal, family, and community social bonds are sustained and where pressures for larger social changes may develop. Human beings play in a somewhat different evolutionary theater from other animals. Humans are more dependent upon symbolic signals than biological signals. Hence, resource-management practices built exclusively upon biological metaphors are likely to fail. They are likely to fail because they cannot capture the nearly infinite potential range of human-resource meanings that can be applied to ecosystems.

Our natural-resource policy proceeds as if society and nature observed the strictly separate paths assigned to them by an industrial bureaucracy — all matters concerning people are to be handled by the personnel department and all matters concerning natural resources are to be handled by the engineering department. Our thrust toward rational order has left us with resource policies irrationally out of control.

The industrial society has long avoided the unity of nature and society. In the pursuit of liberalism, social scientists have scrupulously avoided any taint of biological understanding. In the pursuit of rigor, biological scientists have sought explanation in an ever-narrowing reductionism. And for the most part, literary humanists have thought reality to be found only in rich, inner aesthetic. The failure of our intellectuals is that they have been so intent on dividing the world into their chosen compartments that they have ignored the abiding natural tendency toward unity. Forest-resource policy seems as good a starting place as any for putting our images of the real world back together.

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[1] Ruth H. Allen, "Children and Nature: A Field Study in Sociobiology" (Ph.D. dissertation, Yale University, 1977)

[2] Neil H. Cheek and William R. Burch, Jr., *The Social Organization of Leisure in Human Society* (New York: Harper and Row, 1976)

SMALL URBAN SPACES: A PSYCHOLOGIST'S VIEW

Ann Sloan Devlin, Ph.D.

As a conference topic, man's need for urban open space is timely. This spring William H. Whyte, author of *The Organization Man,* appeared on NBC's *The Today Show* to discuss his new book, *The Social Life of Small Urban Spaces*[1] and Paul Gabb, architecture critic of the *Chicago Tribune,* appearing on a later *Today Show,* discussed the correspondence between American cities judged vital and attractive in a recent survey and the abundance of small urban spaces in those successful cities.

Scale is a critical issue in the success of those spaces, and both Whyte and Gabb point to the importance of the *human* scale in cities (i.e., cities where it is possible to experience urban space on foot, cities which accommodate the pedestrian, not just the automobile). Gabb reports that Europeans fall in love with places like Boston which provide a diversity of spaces scaled to the human; marvelous open spaces like Quincy Market or neighboring Haymarket Square or even the nearby City Hall Plaza. In these spaces it is possible to see people year 'round, mingling and rubbing shoulders with each other, according to Gabb. As a frequent visitor, I concur.

Urban Spaces That Succeed

Whyte feels that the best urban spaces are small spaces like office building plazas, mini-parks like Paley Park in New York City, ledges along sidewalks and even sidewalks themselves. These are places where it is possible for humans to have some control over the environment, places where people can talk, rest, sun, eat or watch others, says Whyte. The formula for success, proclaims Whyte, is: sun, trees, water, food, a wholesome relationship with the street, and seating. In a film Whyte has made, also entitled *The Social Life of Small Urban Spaces* it is this emphasis on seating which receives most attention. Successful open spaces are those which as a minimum provide sufficient seating.

Now what, might you ask, does a psychologist have to say about all of this? As a psychologist, I am of course concerned with human needs and preferences, and I want to talk about a number of those needs and the way in which small urban spaces help to satisfy them. Among the important human needs are those for nature and for control and choice, and it is to these needs I will address myself.[2] People have needs for nature; they prefer it, in fact. In a pivotal study by a team at the University of Michigan[3] researchers examined the rated preference for natural and urban visual material. On an intuitive and anecdotal level, people appreciate the importance of nature. Reports abound of mental patients improving after an outing to the park; however, we need no longer rely on anecdotal evidence. We are beginning to build a data base as the result of the Kaplans' and related work. In the 1972 study, participants were asked to rate a series of slides to test the relationship between complexity and preference for the physical environment.

The slides varied in content from the completely natural to the man-made. Study participants were asked to rate the slides according to how intricate or complex they found them; additionally they rated how much they liked them. The results were striking. With a single exception, the least preferred nature slide was rated more favorably than the most preferred urban slide. Furthermore, that urban exception contained nature (a plaza containing potted plants!). The urban slides were rated as significantly more complex than the nature slides, so it is not the case that complexity predicts preference; it is something about nature as a domain of information which seems to attract people. The study demonstrated the overwhelming importance of nature as a predictor of preference.

Attraction of Nature

Studies have also pointed to human needs for spaciousness and the importance of a vista in satisfying human needs for perceptual access.[4] Furthermore, of

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[1] Available from The Conservation Foundation, 1717 Massachusetts Ave., N.W. Washington, D.C. 20036.

[2] For a more complete discussion of these variables, see S. Kaplan, and R. Kaplan, eds., *Humanscape: Environments for People* (North Scituate, Mass.: Duxbury Press, 1978).

[3] S. Kaplan, R. Kaplan and J.S. Wendt, "Rated Preference and Complexity for Natural and Urban Visual Material," *Perception and Psychophysics* 12 (4) (1972): pp. 354-356.

[4] S. Kaplan, "An Informal Model for the Prediction of Preference," in *Landscape Assessment: Values, Perception and Resources,* eds. E.H. Zube et al (Stroudsburg, Pa.: Dowden, Hutchinson & Ross, 1975) pp. 92-101.

continued relevance is William James' distinction between the human capacity for voluntary versus involuntary attention, the former occurring effortlessly with the latter requiring continued application of will.[5] Scenes of nature, of caves and fires, are those which require no extra effort; they are those which capture the imagination. In an environment that is overloaded with stimulation, the benefit of visual arrays which require no extra effort to process cannot be overestimated.

Plants Versus Urban Problems

Nature, in various forms, serves a variety of purposes in the urban context. Arnold has discussed the fate of cities today which, devoid of green, look like parking lots with their automobile emphasis[6] and he has pointed to the important relationship of nature to buildings and streets.[7] In relationship to buildings, "Trees in their best use reinforce, articulate, add scale and subdivide these spaces." Says Arnold, "An urban sidewalk without trees is like a building without a roof."[8]

In a useful work by Robinette the author describes the solutions that plants provide to an array of urban problems, among them air and noise pollution, unpleasant temperature variations, glare and soil erosion.[9] Zube, as well, has discussed the function of trees as environmental amelioration.[10]

Thus, not only does nature serve to satisfy certain kinds of psychological needs, but it aids the urbanite in physiological homeostasis as well. In terms of related psychological functions, urban open space can provide an extension of human territoriality, whether it be the front stoop of a brownstone, a windowbox planter or a large open space like Central Park.[11] In places like Roosevelt Island, individual garden plots at the north end of the island have provided an important extension of territoriality for those living in high rise dwellings.

Open space combines with nature to produce active, vital streets. Nature enlivens and softens subway entrances (and exits) for example. When emerging from the bowels of the New York City subway in the area of Central Park, there is nothing so refreshing as the sight of green leaves overhead as one ascends the stairs; trees literally provide a breath of fresh air. And certainly open space provides relief within high density settings; it provides diversity and change, two very important human needs. A particularly good example of such contrast from the surrounding streetscape is Paley Park in New York City. This kind of contrast and diversity is intimately tied to the relationship between open space and the urban street. As a traveler to and photographer of Hartford's Constitution Plaza, I have been struck by the ineffectiveness of plazas which are separated (in this case by a couple of stories) from the street. People simply do not frequent places which they do not come across in their general meanderings. Heckscher describes such places as Hartford's Constitution plaza as space on a podium: "The trouble is that the podium is not part of the street and requires a psychological effort to mount to it."[12] One need only walk three blocks over to Hartford's Pratt Street Pedestrian Mall to witness the successful relationship of people to the street when the open space occurs as a natural part of the street itself. In addition, this particular pedestrian mall is punctuated by trees and bushes, an added benefit.

Ideal Downtown Mix

When people think about small urban open space, they think, as Whyte seems to suggest, about little parks, office plazas and cafes. However, as space becomes more scarce, our definition of what constitutes usable open space must expand. As Hecksher suggests, the solution is ultimately a mix.

> As for the ideal 'mix' for a downtown, it should include open space in the form of parks, plazas, malls. It should include a retail and office center; cultural, financial and governmental institutions; a downtown residential development and educational facilities. The existence of these various institutions not only breeds open spaces, but supplies the human factor that populates and enlivens them.[13]

Open space, as suggested by a number of speakers in this conference, can even include graveyards, an idea which Heckscher develops as well. As Hecksher suggests, overlooked open space often occurs in conjunction with residential developments, especially public housing. In research conducted on housing for the elderly the

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[5] William James, *Psychology: The Briefer Course* (New York: Henry Holt and Company, 1892), pp. 220-228.

[6] H.F. Arnold, *Trees in Urban Design* (New York: Van Nostrand Reinhold Company, 1980), p. 3.

[7] Ibid., p. 49.

[8] Ibid., p. 50.

[9] G.O. Robinette, *Plants/People/Environmental Quality* (Washington, D.C.: U.S. Department of the Interior, 1972), pp. 2-3.

[10] E.H. Zube, "The Natural History of Urban Trees," *Natural History Magazine* (November 1973): pp. 48-54.

[11] P. Mann, "Miracle of the Flower Boxes," *Reader's Digest*, (July 1973): pp. 106-110.

[12] A. Heckscher, *Open Spaces: The Life of American Cities* (New York: Harper and Row, 1977), p. 311.

[13] Ibid., pp. 247-248.

role of landscaping contributed significantly to residents' satisfaction with their dwellings, although the architect of the buildings in the study informed me that landscaping was the consideration of lowest priority; the building came first.[14] When a development is adjacent to a park, as was the case with one of the dwellings in the study (see Figure 1), the residential space merges with the public open space and provides an extended territory for the residents.

In the study, the focus was on the contrast between high rise and low rise building forms and the implications of these kinds of structures for residential satisfaction. The results of the study indicated that there were significant differences in satisfaction between dwellers of high rise versus low rise dwellings, the low rise dwellers judging their residences as significantly more attractive than did the high rise residents. The thrust of this difference came from the advantages of ground level living (i.e., as an extension of territoriality providing individual space for a garden).

Fig. 1. Williams Park, New London, Connecticut viewed from the Hempstead Street High Rise

In terms of seasonal preference, seventy-two percent of those living in ground level residences preferred the summer while the majority of the high rise dwellers said it was "the same year 'round." The fresh air, the proximity to nature, the aesthetic appeal of gardens, the ability to walk right out and touch the ground, and this extension of territoriality to the urban open space around the dwelling contributed to the high level of satisfaction reported by these low rise dwellers.

It is noteworthy that when the two high rises in the study were contrasted, the one with extensive landscaping (see Figures 2 and 3) was rated as significantly more attractive. The view of the park afforded at this structure (refer to Figure 1) was also a factor.

Including the space available in and around housing developments as urban open space will change the way we think about such space and will affect future planning. As Heckscher points out, careful attention must be paid to the hierarchy of spaces required to signal the passerby what is public versus what is private space. Heckscher cites the important contribution of Oscar Newman's defensible space concept[15] in helping us to better plan for the interaction of public and private space if residential environments are to successfully contribute to an expansion of urban open space.

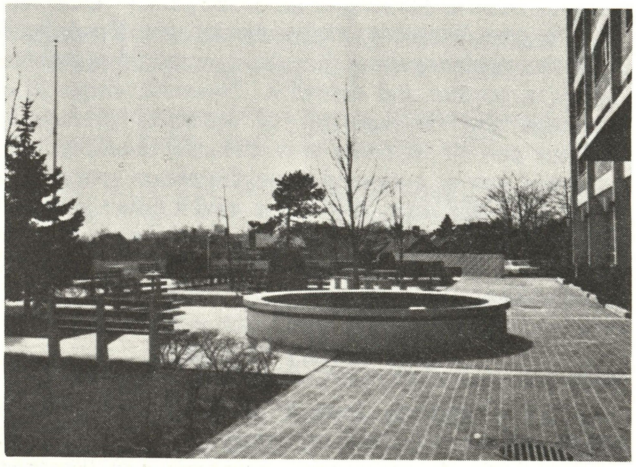

Fig. 2. The Hempstead Street High Rise landscaping.

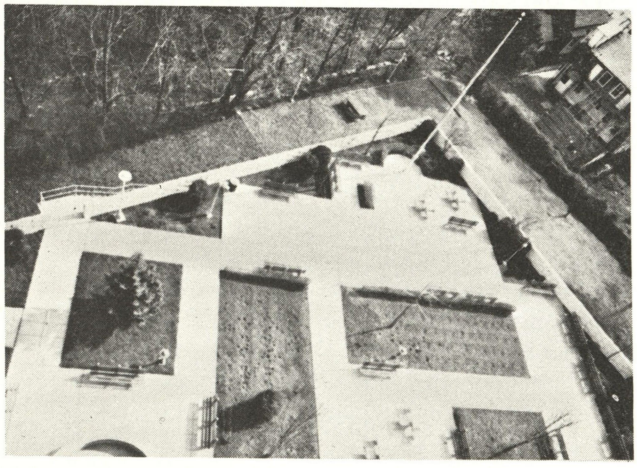

Fig. 3. The Hempstead Street High Rise landscaping viewed from atop the high rise.

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[14] AIA Architectural Research Conference, *Proceedings of the Eleventh Annual Meeting* (Nashville, Tenn.: 1976), pp. 19-32.

[15] *Defensible Space: Crime Prevention Through Urban Design,* quoted in A. Hecksher, *Open Spaces: The Life of American Cities* (New York: Harper and Row, 1977), pp. 320-321.

From a psychological standpoint, the importance of having an impact on the environment, of having control and choice, cannot be overlooked. It is possible, albeit difficult, to involve laymen in the design process. But the public can and must be involved in the design and planning of urban open space. It has been demonstrated that future vandalism can be prevented if users are involved in the planning of an urban park.[16] Essentially, it is Newman's treatise which is pivotal here. If people take a territorial stance about their environment, they are more likely to protect and defend it. Newman wishes to encourage the development of territorial prerogatives on the part of residents in multi-family dwellings. The concept can be extended to neighborhood space where such territorial prerogatives can inhibit future vandalism on a site and encourage upkeep and maintenance. A case in point is the Liberty Park Plaza study carried out by Rachel Kaplan.[17]

Participatory Planning

In this particular study it was important to demonstrate not only the need for urban open space, but the ability of people who would eventually use the space to express an opinion about what that space should look like and what should happen there. This is essentially the area of participatory planning. In this study, simple inexpensive models were constructed and photographs of those models were taken. Eight shots of three different models were taken, yielding twenty four photographs. Participants were asked simply to rate the photographs according to how much they would like it if "the park looked like this." Results from a factor analytic clustering procedure indicated a number of factors, among them a preference for sitting in the park! What was important in this study was that different populations of users had different concerns; the people who lived *and* worked downtown expressed concern about different aspects than those who simply worked there. Those who both lived and worked downtown worried about the nighttime use of the park as a potential place for muggers to hide. They thus saw the park as a mixed blessing, preferring those scenes low in potential threat, while those who worked downtown overwhelmingly endorsed it. The park planners were thus able to take into consideration a variety of different concerns which had to be met in the final design of the park. Overall, there was an outpouring of enjoyment and appreciation for the opportunity to participate in the study. This piece of participatory planning aptly demonstrates the role that is possible for the urbanite in the planning of his/her own future open space.

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[16] R. Reemer, "Hell's Kitchen and the New Earth Park," *Fitness For Living*, (May-June 1971): pp. 30-34.

[17] Rachel Kaplan, "Liberty/Division Park: Citizen Survey." Unpublished manuscript, (1976).

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THE INNER CITY

Nicholas R. Carbone

The movement away from America's older cities was supposedly irreversible. Over the past thirty years, jobs, tax dollars, and people with disposable income have flowed out of the central cities to relocate in surrounding suburbs and in Sunbelt boomtowns. We were told that the old central cities had outlived their usefulness, that they were relics from a bygone era. Increasingly, cities became a kind of dumping ground for people who had no other place to go — the elderly, minorities, the unemployed, the handicapped. By 1974, nearly two-thirds of Hartford's residents were trying to make ends meet on an income that was below the poverty level set by the Bureau of Labor Statistics.

But international economic forces are beginning to set the state for the resurgence of our older cities. We are seeing the early signs of revitalization in Hartford — and we are no longer asking whether we can make Hartford work. The question today is: Who will benefit from Hartford's resurgence? Will Hartford's current residents share in the economic revival of the city? Or will it happen at their expense?

Two Cities In One

Most major cities have become two distinct cities — a city of the highway that the commuter sees and uses and a city of neighborhoods in which people live.

After a long period of decline, Hartford's city of the highway is working well. A civic center in the heart of downtown has attracted people and investment dollars. Office space is fully rented. Convention business is coming into town. Suburbanites feel safe on our downtown streets and new restaurants and nightspots are flourishing.

Our city of the neighborhoods is not doing well. Many of our residents don't have a job or the skill to get one. Many of them live in substandard housing because they can't afford anything better. Many of them don't have access to health care. Our poorest neighborhoods have the highest amounts of crime — so many of our people, especially the elderly, live in constant fear. Many have given up hope of a better life and have become victims of alcoholism or drug abuse.

Most of those problems are directly related to people's lack of control over their own economic lives. Psychologists tell us that a person's job is the single most important factor shaping or holding together the human personality. When we meet a stranger, one of our very first questions is: "What do you do?" The job gives identity. It influences the way we feel about ourselves, and how others view us. On a more basic level, our job — to a large degree — determines how we live, how we eat, how we educate out children.

The lack of jobs in a city like Hartford affects all of us, not just the people who are unemployed. In the words of political scientist Norton Long: "The loss of meaningful participation in the mainstream economy has resulted in neighborhood decay, social disorganization, crime, vandalism, blight, and housing abandonment — all the phenomena of crisis associated with the ghetto."[1]

And yet some economists still talk about "acceptable levels of unemployment." These economists were trained to think in terms of macro-economic systems — systems so large and impersonal that they can't recognize the value and worth of the individual. The macro-systems in our economy and in our government have removed people from the decision making process — and they feel ineffective, powerless, alienated. Those feelings are not confined to unemployed people in the inner city. They are shared by people who have achieved the trappings of success in the suburbs. A recent national poll revealed that seventy percent of the American public is disenchanted with our major institutions, including government, business, and the church.

By their very nature, macro-systems are dehumanizing. When governments or businesses are dealing with millions of clients, people become numbers — long, complicated sets of numbers and letters that few of us could remember if we tried. So machines sort those numbers and send the bills, and record the payments — and do much of the work that people used to do.

And our macro-systems tend to be costly. In our desire to be bigger and better, we are consuming our resources at a rate that has fanned inflation, and raised the possibility that we may be exhausting some of those resources. Bigger and better may not be a realistic alternative in the future. Chase Manhattan Bank indicates that for the foreseeable future, there will be a continuous capital shortage of at least thirty percent of America's needs. We are going to have to make some tough choices about how we allocate our resources, how we spend our capital.

[1] Nicholas Carbone, "The Inner City," *Hartford, The City and the Region* (University of Hartford 1979).

Some of the new constraints could work to the advantage of our older cities. The rising price of gasoline and uncertainties about its availability already are forcing some people to reexamine their attitudes about mobility. My sister and her husband and six children live in one of Hartford's suburbs. This one household owns — and uses every day — three automobiles. My sister drives off to work in one direction, while my brother-in-law drives off in another direction. Two of my nieces need cars so that they can get to part-time jobs after school. This family is not unusual. Most suburban communities grew up around the belief that the automobile would provide cheap and efficient transportation for residents. Virtually nothing is within easy walking distance from the average home in Hartford's suburban neighborhoods. Cars are needed to get to work, to get to church, to get to a drug-store, an ice cream parlor or a baseball field.

City neighborhoods tend to be more self-contained. Residents can walk to work, to stores, restaurants, churches and schools. And that makes city neighborhoods more energy-efficient than the suburbs — a fact that is beginning to encourage suburbanites to move into the city. In many of our neighborhoods these transplanted suburbanites are renovating old homes and converting apartment buildings into stylish condominiums. On one hand, the return of the middle class is a positive development for cities like Hartford. But it can create a new set of problems, as lower-income city residents are displaced by the reinvestment process. Where will they go? What will they do? How will they adapt in a society that is pulling back, that is trying to adjust to new economic, social, and political constraints?

Crisis Of Values

In California and New York physical violence broke out as people fought over their place in line at gasoline stations. Imagine the anger and frustration of people fighting over housing — or heating oil — or food. Competition for the essentials of life could lead to bloodshed, repression, perhaps even to the end of our civilized society.

In an essay written for the Harvard Business School in 1976, George C. Lodge observed:

> If we preceive the nature of our crisis sooner rather than later and do not shrink from its implications, however threatening to existing assumptions and interests those implications may be, the chances will increase that our transition from our old ideology to a new ideology will be relatively benign.
>
> But, if we wait, confident of somehow muddling through, we shall lurch from crisis to crisis until large-scale depression and disruption cause us to welcome the orderly relief of dictatorship.

Lodge called on American business to weave together a new system of definitions for traditional values — survival, justice, economy, creativity, self-respect — to give new meaning to people's lives, to reverse the growing sense of alienation in the workplace and in the rest of society. He noted that American business still sings the virtues of the Puritan ethic — hard work, thrift, delayed gratification, obedience to authority. That's the notion of rugged individualism, of picking oneself up by the bootstraps that American business portrays as the ideal — until it tries to sell its products. Then slick Madison Avenue advertising bombards us with the message that we *need* that product and we need it now. We deserve the good life, the ads tell us — immediate gratification that gives us lots of leisure and luxury.

The ideal of rugged individualism has been muddled in the workplace as well — on massive, impersonal assembly lines, in the sea of desks that flow from one wall of a modern office building to another.

Our concept of private property is changing, too, as time payments and lease arrangements make it possible for people to use and enjoy items that they do not own. In George C. Lodge's opinion, "Today there is a new right which clearly supersedes property rights in political and social importance. It is the right to survive — to enjoy income, health, and other rights associated with membership in the American community or in some component of that community, including a corporation."

In more traditional times, a group of people formed a corporation, ran the business, collected the profits and set corporate policy. In these days of multi-national conglomerates, the concept of ownership of a corporation has undergone some drastic changes. Approximately 1.5 million people own shares in General Motors. They "own" the corporation. But in a real practical sense, they do not control or direct the corporation. They are not responsible for its actions or policies.

Alfred Sloan saw this trend developing in 1927, when he wrote:

> There is a point beyond which diffusion of stock ownership must enfeeble the corporation by depriving it of virile interest in management upon the part of some one man or group of men to whom its success is a matter of personal and vital interest. And conversely at the same point the public interest becomes involved when the public can no longer locate some tangible personality within the ownership which it may hold responsible for the corporation's conduct.[2]

These kinds of changes in the corporate community have contributed to a growing discontent, a feeling of alienation, a sense that there is no one in control.

Similar changes with similar effects are taking place in government. Bureaucracies have a tendency to perpetuate themselves — and that survival often becomes an agency's goal, with service to people relegated to an almost secondary function. Large, bloated government

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[2] Nicholas Carbone, "The Inner City."

structures seem to respond only to powerful interest groups and the individual citizen senses that he is isolated, cut off from the decision-makers, powerless. And the citizen wonders about the purpose of government, as he watches one department write regulations that are contradictory to programs being implemented by another department.

Social Responsibility

We need to reexamine the objectives of government — what they are and what they should be. The American public seems to be greatly confused on this point. On one hand, people tell pollsters that they are increasingly cynical and alienated from government. At the same time, however, many of those same people are demanding more of government. Because they feel powerless over their own lives, they look to government to help them. If government overpromises, we run the risk of raising expectations to unrealistic levels. When that has happened in the past, frustrations have erupted into riots and other forms of violence.

But if we offer no hope, if we tell people that they have no value to society, we're going to increase the social costs of drug addiction, alcohol, mental breakdowns and violent street crime.

We can begin by remembering what two former Presidents said about the purpose of government. Thomas Jefferson put it this way: "The care of human life and happiness, and not their destruction is the first and only legitimate object of good government." But since this is a non-partisan issue, I'd like to quote a good Republican as well. Abe Lincoln said: "The purpose of government is to do for people what people can not do for themselves." We've strayed from these goals over the years. But if we keep them in mind — as we recognize the limitations of government — we can begin to devise strategies that will involve people in the shaping of their own destinies. We can help to devise those strategies at the local level. But it is crucial that we remain realistic — that we don't fool ourselves into believing that we can solve major structural problems at the local level.

We can't create a national energy policy. We can't reverse the trends that are reallocating world resources and causing inflation in virtually every industrialized nation. We can't prevent automation from displacing more and more people from the work force.

We can't solve these kinds of structural problems at the local level. But we can argue on what needs to be done and begin to apply some friendly persuasion on the federal government — and the corporate community — to get the job done.

Some corporations have begun to redefine the nature of the job, organizing employees into self-managed work teams that take collective responsibility for large parts of the production process. These experiments seem to pay off with improved productivity, increased profits — and happier employees. As a society, we should encourage these efforts to restore the worker's sense of accomplishment. According to a Department of Health, Education and Welfare task force: "What workers want most, according to more than one hundred studies made in the past twenty years, is to become masters of their immediate environments and to feel that their work and they themselves are important — the twin ingredients of self-esteem."[3]

And we must encourage large corporations to redefine their notions about corporate-social responsibility. John H. Filer, Chairman of the Aetna Life and Casualty Company, said recently that corporations should

> . . . . attempt to change our practices because the corporation does have some considerable power to bring about change, and I know of nothing that purports to limit the corporation to activities which benefit it alone. In other words, if there are problems to be solved and the corporate community has the power to help solve those problems and it can do so without significant damage to itself, then why shouldn't the corporation proceed? This is the way individuals live their lives, and while the corporation is a fictitious person, it seems to me not inappropriate for a corporation to try and act reasonably human.

And, Filer added, "in my experience when you try and manage your corporation in this way, you also end up with a very large benefit for your corporation from the enthusiasm, loyalty, thoughtfulness and increased performance of your better people."[4]

Government needs to do things differently, too. The federal government needs to work out solutions to major structural problems that are contributing to a growing national pessimism about the future. We need an energy policy that gives all Americans equal access to energy at costs that are affordable. We need a public transportation network that minimizes energy consumption and helps to open up expanding job opportunities in the suburbs to people who live in cities. And the federal government needs to begin tough, even-handed enforcement of its own laws. Affirmative action laws must be enforced to give unemployed minorities — most of whom live in cities — the opportunity to work. The federal government needs to rewrite its tax laws, too, to eliminate the tax credits that encourage large corporations to shut down factories in the United States — and move their jobs and capital investments overseas.

While the federal government is working out solutions to our major structural problems, local government should not be sitting on the sidelines. We must be implementing innovative policies and

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[3] Nicholas Carbone, "The Inner City."

[4] Nicholas Carbone, "The Inner City."

programs to help people cope with the effects of those structural problems.

We need to shift the gears of our local governmental apparatus to make it work on behalf of all of our residents. City Hall needs to take an activist role, advocating programs that can help welfare-dependent people become self-sufficient. We must demand a fair deal for city residents from suburban communities, the state and federal governments — even when it means taking our case to court. We need to develop programs that involve neighborhood residents in the decision-making process and, in some cases, in the actual delivery of services.

If local government is willing to accept its responsibilities, so must the state and federal governments and the corporate community. We've shuffled problems around for so long that many people believe that government has abandoned them. They feel victimized by big business, too, as evidenced by the current lack of trust in the major oil companies, the utilities, and most manufacturers. Our democracy and our organized society are threatened when a large segment of the population believes that the system is stacked against them — that they have no chance of improving their lives and the lives of their children.

President John F. Kennedy gave us a warning which we cannot ignore. "Those who make peaceful revolution impossible," he said, "make violent revolution inevitable." We must provide the economic tools that will allow a peaceful revolution to take place in our cities, in our poorest neighborhoods. We must create the jobs that will restore self-respect and an individual's stake in society. If we do that, the Hartford of the 1990's will be a healthy city with vibrant neighborhoods that are racially and economically integrated. We will have a mix of jobs — jobs that are labor intensive as well as jobs that require highly sophisticated skills. And we will have reordered our priorities, so that jobs that are important to the survival of the community — police officers, teachers, fire fighters — are given new value. The classroom teacher will not feel pressured to move into administration as a measure of success because we will restore the sense of fulfillment and self worth that goes with a job well done.

If we are successful, a new economic system will grow out of our redefined value system, an economic system that will concern itself with urban conservation, the prudent allocation of resources, the recognition of our limits. We will move from a consumption-oriented, throw-away economy to one that is built on the use of renewable resources — the sun, the wind, hydroelectric power. And we will be more efficient consumers of goods and services.

If we fail, the energy-efficient central city will become an upper middle class enclave by the 1990's. The have-nots will be living where they have always lived — where other people don't want to live. The have-nots will be crowded into split-level ranch houses that have been converted into rooming houses and apartments — in the outer suburbs, far from public transportation systems, in the most energy-wasteful reaches of the region.

If we fail, automation will take over more and more of our lives — and even college graduates will find it difficult to find a satisfying job. The gap between the haves and the have-nots will grow, with alienation and disenchantment boiling over among the better educated people who have been shut out by our institutions. And they may respond with violence, just as the college-educated members of Italy's Red Brigade already are responding. We have a choice. By 1990, we can build a central city that is an elitist stronghold — or we can create a city that is diverse, a city that works equally well for all of its residents, a city that makes it possible for people to participate in our economic and governmental systems.

Long Range Planning For Urban Open Space

THE STATE'S PERSPECTIVE

Arthur J. Rocque, Jr.

I suppose I should start at the beginning; that is, with a brief history. When first initiated, the federal funding program under which recreation and open space property was acquired — the Land and Water Conservation Fund — was utilized primarily to purchase open space, rather than intensively develop parks for recreational purposes. Preference was given to purchasing large holdings of primarily forested land with a decided preference towards resource preservation rather than recreation. It was felt that the long-term utility of these lands for recreation could best be achieved through preservation of large tracts of open space. As you might expect, the program had a non-urban orientation. If you look at a map of the State of Connecticut's holdings, you will note that they are predominantly rural, consisting primarily of forested lands and lands previously farmed.

Recently, however, there has begun a reverse swing of the Land and Water Conservation Fund pendulum. The provision of recreational opportunities is now the highest priority. Priority for acquisition is now made at least in part on the basis of population density, or access by large segments of the population. That means acquisition is given a high priority if the parcel in question is located in or near an urban area or easily accessible from an urban area, either by public transportation or other readily accessible means.

Additional Preservation Programs

Now, there are other funding programs that provide monies for both the acquisition and development of urban recreational properties. Beside the Land and Water Conservation Fund, we have the Urban Parks and Recreation Recovery Program passed in 1978 by Congress. This provides matching funds on a seventy percent federal and thirty percent state or local basis for the purpose of rehabilitating and upgrading existing urban parks. Not only does this program have a better matching fund formula than the Land and Water Conservation Fund program, which is fifty-fifty, it also addresses a need that is not generally addressed by the LWCF; namely, its funds may be used for the types of long-term maintenance and rehabilitation that large municipal recreation areas so often require. Currently there is a new program trying to find its way through Congress, the National Heritage Program. It is designed to protect cultural, historic and natural areas that are of statewide or national significance. Hopefully it will come into being, thus providing another source of assistance to the state of Connecticut.

Through the Office of Planning and Management's Statewide Comprehensive Outdoor Recreation Plan, the State determines funding priorities for open space and recreation. The plan is updated (at least in theory) at five-year intervals and resubmitted to the U.S. Department of the Interior's Heritage Conservation and Recreation Service. It outlines recreational and open space needs on the basis of priority of need and sets funding priorities to meet these needs. As an adjunct to this plan, the state has an annual planning agreement with the Heritage Conservation and Recreation Service. Included in the current planning agreements is a study of users' access to recreational facilities, particularly as it applies to major population centers; an identification of needs-for-recreation study; a transportation network study, focusing in part on the Title XX Busing Program (a federally subsidized attempt to provide bus service from population centers to major recreational facilities), and, finally, a priority rating system for evaluating state and municipal projects. This latter system is used to determine how well the proposed projects meet funding priorities before final applications for grants are made to the Land and Water Conservation Fund. Bear in mind that all the grants must fit needs identified under the Statewide Comprehensive Outdoor Recreation Plan.

Multiple Planning Problems

Now when anyone discusses the Statewide Comprehensive Outdoor Recreation Plan, and identifies it as a long-range planning process, it is only fair that one identify also the problems associated with that process. First and foremost they are budgetary. Funds for recreational planning are usually the first to get cut during times of fiscal constraints, followed closely by cuts in funds for land acquisition. Needless to say, without a guaranteed budget, it is difficult to maintain a continuum in a planning process. In fact it is sometimes difficult to maintain staff. A second major problem we encounter in long-range planning is that of complexity. Long-range planning for recreation is interrelated with demographics and the transportation systems available. Another bugaboo, and one which provides unlimited opportunities for frustration, is the inaccuracy of projections. The projected increase in population for 1980, made in 1960, has not occurred, as outmigration and smaller families became a phenomenon of the seventies. Planning for the year 2000 is difficult to do with any accuracy.

A final problem associated with long-range planning falls in the category of lost opportunity, where there may

not be flexibility in response to new opportunities. One needs to be able to respond to new opportunities as they arise and adjust relevant projections accordingly. I am sure you all have your own private thoughts as to what record of flexibility Government boasts at all levels, be it federal, state or local.

Contrasting Roles

Now to contrast the roles of the state and local governments in recreational planning and property acquisition. In general, the state is responsible for providing the more extensive, larger facilities. That is, the state must cater to and provide for statewide recreational needs, because it represents a potentially larger user group than the individual local governments. I would include in this category, for example, the major state-owned recreational beaches, the state forests, and, on a smaller scale, state-owned boat launch ramps.

In part the state's role is bolstered by the easy availability of information. In spite of inaccuracies of projections and the complexities of interrelated multiple factors, traditionally, planning information is better suited to a regional or statewide effort. This is simply because the inaccuracies of data are mitigated or muted when they are extrapolated over a larger area. This is perhaps fortunate because the state has better access to larger amounts of funding than do local municipalities. That is not to say that the state has access to *unlimited* resources. Remember my earlier remarks about budgetary constraints. Nevertheless, because of the larger populations served by state facilities and a reduction in competition for funds because there are fewer states than there are municipalities, the chance to obtain funding for property acquisition is generally better at the state level than at the local level. And, as a last point, I would remark that at the local level, particularly in urban areas, the primary constraint to providing more recreation areas often centers on the capability to maintain existing facilities rather than to acquire new facilities. I would also note, however, that the state is not immune to these problems. But they are more often felt severely at the local level.

Existing Recreational Areas

I would like to give you four examples of recreational areas which reflect problems which I have discussed. The first example is Ocean Beach Park located in and owned and operated by the City of New London. Over the past decade Ocean Beach, which is open to all for a small parking fee and located relatively close to a modestly dense population center, has been underutilized. It has been underutilized in a state where the highest priority is for water-based recreation. Now why is that? Poor marketing? Lack of direct accessibility from an interstate highway? Proximity to Rhode Island beaches? Another example is Silver Sands State Park located in Milford. I don't know how many of you are familiar with Silver Sands State Park, but I must tell you that "Silver Sands" is a euphemism at best. It is a highly eroded and deteriorated stretch of once-sandy beach, bordered by an overfilled municipal landfill that is a recognized pollution problem. The state considers the development of Silver Sands into a usable recreational beach as its highest priority. Yet there is strong local opposition to development of a facility which is owned and operated by the state. And because of the deteriorated nature of the beach and the problems presented by the landfill, the development costs are overwhelming. Yet Silver Sands is located approximately midway between the state's two largest urban centers, Bridgeport and New Haven, and is suitable for both direct access from Interstate 95 and bus service. Perhaps this situation is the best example of the definition of an "insurmountable opportunity."

A third and happier example is Norwalk's South End. Originally a fishing and business community, the south end of Norwalk has fallen on hard times during the last few decades. In seeking to reverse this trend, the city has proposed the acquisition of a waterfront parcel and the development of a miniature waterfront park with an historic maritime theme. The park would, for example, contain a few old sailing vessels. On the basis of this proposal the city has attracted both public and private funding for the revitalization of the entire waterfront area and currently holds one of the state's major oyster festivals there. I will leave you with a final example, that of Bridgeport's Seaside Park. The park is well developed and long established in the city known as the Park City. It has a stretch of sandy beach longer than two miles facing directly on Long Island Sound. It is backed by an upland park area, well shaded, with benches and lawn, adequate parking and good bicycle and pedestrian pathways. Like Ocean Beach, Seaside Park is underutilized. How many of you know of its existence, or how to get there?

Wider Focus For Future

Well, as you can see from the examples I have provided, not *all* of our problems are financial ones. Whatever they may be, the state now has a wider focus on what is necessary to provide for the healthy recreation of its residents; that is, a balanced offering of intensively developed facilities close to urban areas, in conjunction with those larger forested areas more remote from our towns and cities. The primary goal of the Statewide Comprehensive Outdoor Recreation Plan, then, is to provide maximum recreational opportunities for the maximum number of Connecticut's residents.

LONG-RANGE PLANNING FOR OPEN SPACE

Clinton Brown

For many years, the major concept of Open Space was the provision of parks — green areas — to relieve the monotony of urban development. Today, we have come to realize that setting aside a piece of land here and there for recreation is not all there is to providing a healthy environment for people to live in. Modern open space concepts now include two criteria not previously considered:

1. That the open space meets not only physical but psychological human needs
2. That the resource base, the land itself, be protected and enhanced

We have also come to realize that it is necessary not only to plan open spaces for the immediate community, but it is necessary to consider the place of the community in a region; to study the land use, population distribution and transportation as it relates to both the community and the region.

We see that the wise use of open space can create a framework for shaping the form our urban and suburban settlements will take. We may say that open space preservation is a method of growth management, used to affect the timing of urban development, both in the community and the surrounding region. With this broader vision of the purpose of open space preservation, I will discuss how we set about producing an acceptable plan for development which will take into account good conservation practices as well as the need for recreation and other uses of open spaces to enhance the quality of life in a community. Then I shall examine briefly the role the state and the local community can play in facilitating community and regional planning. Conversely I will discuss the obstacles on state and local levels to achieving this planning. I will suggest a number of techniques to be employed in open space preservation, and finally, review some new directions which the state and local communities are taking to press for more efficient long-range planning on regional and local levels.

Goals

The Planning Office of the Town of Waterford defined the goals which were to guide the development of an open space plan within the town.

1. To provide a system of recreational facilities of adequate type, size and variety to service present and future populations in locations that are reasonably accessible by several means of transportation consistent with the ability of the town to finance the endeavor
2. To establish a network of open space areas that serve to guide and direct future growth and preserve the rural characteristics of residential areas. Such a network should connect active and passive recreation areas and should follow major water courses

Process

In order to attain these goals, the Town of Waterford took the following steps through the Town Planning Office.

1. Prepared an inventory of existing facilities; a list and a map which shows where open spaces exist and how much we have
2. Identified the needs of the community through citizen surveys and talks with private civic organizations
3. Established recreation standards: What type of facilities are desirable, where they should be located to give all of the population fair access
4. Considered the cost of development of the facilities
5. Recommended a recreation plan for the town which satisfies the needs of the community and meets standards related to the goals as defined above

To achieve this, some trade-offs may finally be necessary, to see that other community needs are met which the public feels are equally important. In the development of long-range planning for open space both the state and the local governments have specific roles to play. The State of Connecticut acquires land for parks and recreation operated under its jurisdiction. It also provides funds for local acquisitions, and it allows towns and cities to plan for regulated tax open space. Local governments have the authority to adopt open space plans, set up regulations for its use, and decide on the tax rate for open spaces. They may also acquire land on their own authority and accept grants from the state or towns for such purposes.

However, there are a number of obstacles to the integrated development of open spaces in Connecticut. First of all, the state's enabling legislation is not broad enough to allow either the state or local governments to acquire land if it is to be put to mixed or multiple uses. The grant money must be used for land for open space and recreation only, and structures such as libraries,

museums, schools and hospitals are never to be built upon lands acquired with this grant money. Thus problems arise with defining large open spaces near academic institutions as open space, for future expansion may thus be prohibited even if totally justifiable. The state cannot under present law provide reimbursement for open space acquired through innovative techniques such as conservation easements. The state has not released funds for open space acquisition recently because of the fiscal problems of the present day.

If a locality accepts federal funds from a granting agency such as the Department of Interior's Heritage Conservation and Recreation Services (HCRS), it must give assurances that the facility will be open to all citizens in compliance with civil rights laws. For towns located near large cities, fear exists that the facilities will be inundated by people other than the residents of the town.

Local communitites do not adopt all the legislation that allows for open space preservation, and they do not coordinate their acquisition activities with other local and regional and non-public entities such as land trusts and adjacent municipalities. Finally, the taxpayers may question the cost versus the benefit of acquisition of a particular piece of land within their community.

New Techniques

Despite these obstacles, there are some techniques now being used in Connecticut which encourage long range planning for open spaces.

1. Conservation easements which provide for conservaton without the acquisition by purchase of the piece of land, and retention of ownership by the seller or donor of the easement rights
2. Land trusts which serve as tax exempt recipients of gifts of land or money to buy land. Effective control by the local citizens of such an organization ensures continuing interest in the town
3. Leases, which may provide for short term needs for recreational areas for ballfields while the possibilities of long term acquisition are explored
4. Donations, directly to the town, which allow for altruistic contributions of local citizens to their community
5. Zoning and subdivision regulations. These may include Stream Belt Zoning, open space in subdivisions, planned unit development, as well as preferential tax assessment. The State of Connecticut by Public Act 490 allows a reduced assessment for acreage over twenty-five, and more than sixty-seven hundred acres in Waterford are currently in that category. Landowners are encouraged to apply for the preferential rates
6. Purchase of development rights, which pay the landowner the difference between developed and undeveloped value, in order that critical pieces of open space may be preserved
7. Designing urban open spaces such as vest pocket parks, atriums, near population centers

New Directions

Some of the more imaginative new directions which will become part of the efforts to preserve open space include:

1. An optional payment of funds by the developer for open space elsewhere when land in a development is not suitable for prescribed open space which is mandated
2. Transfer of development density: If an owner of land has the right to put ten dwellings on his land, the right can be transferred elsewhere so that perhaps twenty dwellings could be permitted in another area more suitable to development (near sewers, buslines and shopping), thus preserving the open land
3. Public and private partnerships, which would allow a package funding by land trusts, grants, donations and town funds as a package to stretch the money available
4. Imaginative use of the rights-of-way of utilities and sewer lines, which could serve as corridors throughout the town, often connecting active and passive recreation areas

On a regional level, the Southeastern Connecticut Regional Planning Agency has suggested water pollution control programs which involve the cooperation of nearby communities to preserve watersheds. There is a State Coastal Area Management Program to direct and control the rational land use of coastal areas, with the consent of the towns directly involved. The state enacted legislation in 1979 which allocates funds for the purchase of farmlands to ensure that they be used so as to preserve arable land. In partnership with state and federal govenment, I believe that, using the techniques outlined here, small municipalities can manage growth yet preserve open space.

Problems Of Open Space Management Near Urban Centers

TREES AND PEOPLE

Robert L. Garrepy

One might wonder what interest a professional forester would have in managing urban open space when it is well known that foresters spend their time either in the woods or in fire towers trying to avoid the public.

It is equally evident that trees, a forester's true life, are patently unsuited to intensively-developed areas. They hinder expansion of urban facilities; they are hazardous, having a tendency to fall on houses and get in the way of motor vehicles; collectively they offer shelter to muggers and other unsavory elements of society; they are a nuisance, attracting dogs and birds and shedding leaves over everything in the neighborhood; and they are expensive to establish, protect, maintain and to remove when they finally succumb to environmental stress.

The last statement, of course, is unjust because, in fact, trees and human needs are interwoven through history. With the exception of some desert areas, wood has served as fuel, building material, artistic medium and weapon for thousands of years. Fortunately, forests were usually close by settlements and wood was in adequate supply for existing populations. Over the years, however, as towns and cities grew, wood became scarce in many areas and the first *urban resource problems* developed.

Early Forest Management

Many of us interested in forests and trees are aware of the intensively managed woodlands of European countries. In some areas, forest stands have been carefully tended for a thousand years or more. This appreciation for and valuation of trees is a direct result of a limited land base coupled with high population densities and heavy demands for forest products and amenities — a typical urban situation.

According to one theory, travel beyond city walls became so hazardous during the Dark Ages that gathering wood for fuel or construction became very difficult. To replace woodlands that had been cleared, community forests were established close to towns and cities where there was more protection. Concern for extending the supply of available wood is also thought to be a reason that coal began to be used as a major source of energy. So the problems of managing urban open space are not new.

When European colonists first settled what was to become the United States, the New World forests seemed endless. Trees hindered settlement, made agriculture difficult and harbored unfriendly natives and wild animals. Forests were things to be cleared despite the need for a variety of wood products. While most farms had at least one wood lot, *cedar grants*, or wetlands containing cedar trees, were given to many soldiers who served in the Indian wars of the early 1600's. There was little concern on the part of the general populace about woodland conservation, although public grazing areas or Commons were established in many towns and cities. The Boston Common and the Lebanon, Connecticut green are two excellent examples of early open space.

During the middle 1800's, the country changed from a basically agrarian society to one characterized by industrial development. As natural resource exploitation increased, some conservation programs were initiated. The system of national parks began with Yosemite in 1864 and Yellowstone in 1872. The forerunner of the U.S. Forest Service was established in 1891 and the Forest Service itself came into existence in 1905. Here in this state, the Connecticut Forestry Association was founded in 1895 as the predecessor of the present Connecticut Forest and Park Association. The office of State Forester was created in 1901.

Thanks to the efforts of these early conservationists and to the abandonment of marginal farmlands, most of the country now finds it has more forest land than at any time since colonial days.

Diverse Uses A Necessity

A look at Connecticut's population distribution and availability of land poses a good example of the problems and conflicts between resource protection and meeting the needs of society. The state is fifth in the nation in terms of population density (3.2 million people on about 3.2 million acres). When some 400,000 acres of agricultural and open space areas are added to the woodland, Connecticut has about seventy percent of its total area undeveloped! If there is so much forest land and so much room, then why should there be problems with managing urban open space? Before an answer is attempted, some definitions are in order:

Open space: areas with natural and/or scenic resources, held, managed or maintained in an essentially undeveloped state. For this symposium, however, the definition should be broadened to include those areas which provide recreational opportunities and a chance to escape the pressures of daily living.

Human need: a lack of something requisite, desirable or useful.

Management problems arise from differences of opinion concerning those two definitions — what is "open space" and why do we need it? The human needs aspect is perhaps the easiest to address.

Psychologically, most human beings are supposed to have a tie to Mother Earth, perhaps the result of ancient wonder at the rebirth of life each spring. For some three hundred years, this country had a history of land worship. The goal of the colonist, the pioneer, the farmer and today's typical family was and is to own their own property — a symbol of self-sufficiency. But for many, land-ownership is impractical or impossible. Those people who live in urban areas, either by choice or necessity, must settle for a surrogate such as the local park or even a vacant lot.

There is also a need for personal "space." Studies of test animals under crowded living conditions indicate a variety of stress problems can result from a lack of privacy. Prison inmates often show stress and hostility traceable to overcrowding and restricted movement. In densely populated areas, residents are placed under conditions that create stress and frustration. The availability of open areas provides some opportunity for these people to escape from the pressures of living.

Open Space Concepts Vary

Obviously, the perception of what constitutes open space will differ depending on where a person lives. Inhabitants of a rural town will have one concept — considerably different from that of a core-city Hartford resident. But rural communities, or even suburban areas, rarely have serious problems providing the amenities of undeveloped land. The very title of this symposium indicated where emphasis must be placed — the urban setting.

Even if most of us can agree that open space may vary from golf courses to parks to open lots, and that the concept of providing undeveloped areas for public use is a good idea, there are still those who object to the idea. Some town officials feel that space left undeveloped represents a tax loss to the municipality. Many developers view these areas as lost opportunities. The cost of acquiring and maintaining open space can be considered a waste of money when compared to the need for other social services. And, where urban parks are not properly cared for, there is a common fear of crime. However, since most people feel urban space areas are desirable, it is logical to examine what facilities exist and how a local government can acquire and maintain additional areas.

There are four major categories of open space lands that are available to the public in varying degrees:

1. *State lands:* parks, forests, preserves, etc. These areas normally provide for a variety of facilities, but are finite in size, suffer from over-use and are often located far from urban areas.
2. *Water company lands:* Either public or privately-owned, these areas are maintained specifically to provide adequate supplies of high-quality water. Generally under-utilized, water company property offers potential for some recreation, but again, areas are often some distance from urban communities.
3. *Municipal property:* Town-owned land is becoming more common, particularly since federal cost-sharing for acquisition is available through the Heritage Conservation and Recreation Service.
4. *Private lands:* Owned by individuals or corporations, private property usually has limited public accessibility, but is still important, particularly in suburban areas. Golf courses, horse riding stables and hiking trails are a few uses of private property that benefit the general population. But here again, this category of open space is not readily available to those living in urban areas.

Providing and maintaining open space for urban areas takes money! Given sufficient dollars, areas may be acquired, recreation facilities developed, and maintenance kept at a level that assures public safety. Those dollars don't come easily, however. The solution is, of course, public support.

You as an individual and you, collectively as the public, must support open space funding. Votes determine what government agencies do (although at times it may not appear to be true). A bond issue or a slight increase in the mill rate can provide for funding at local or state level. And federal cost-sharing is already available through the Heritage Conservation and Recreation Service of the Department of the Interior. The cost of open space must be recognized as being a legitimate expense of urban living — similar to fire protection, sanitation and public transportation.

Public moral support of on-going programs is almost as important as money. Criticism should be constructive, with reasonable alternatives offered. Minds should be open to change and innovation and must be tolerant of other interests. Not all people enjoy bird watching, snow-mobiling, hunting or hiking, but there should be a place for all. Urban areas should be able to provide relatively quiet areas for contemplation, facilities for basketball and locations suitable for block dances. Multiple use is essential when the resource is limited.

And when considering the limited space available in most urban areas, why not place emphasis on moving people to where the open space is?

After all this, some may still wonder why a forester is concerned with urban open space. Well, the fact is that nowhere is a tree more appreciated than in an urban area, and trees are or should be an integral part of any open space development. Despite my opening comments, the benefits of trees and other vegetation are numerous and need not be discussed here. And foresters, long trained as resource managers, have an interest in all matters concerning the environment. Trees are organisms of the future. We work with trees which grew before our time and leave others for those who will come after us. Although today we are discussing urban open space, perhaps Aldo Leopold said it best. "The richest values of wilderness lie not in the days of Daniel Boone, nor even in the present, but rather in the future."

OPEN SPACE MANAGEMENT NEAR URBAN CENTERS

John Hibbard

When one looks at the multiple problems we face in maintaining existing open spaces near urban centers in Connecticut and the scarcity of funds available for that maintenance, let alone the acquisition of new open spaces, it seems that we must meet a stiff challenge if we are to preserve a quality environment for our citizens.

Major Problems Of The Sixties

Perhaps the most serious threat to our open spaces in Connecticut in the last twenty years began in the sixties with the encroachment of highway construction on existing city parkland. As commuter traffic from suburban areas to the cities increased on the existing highways, it seemed that highway planners saw as the most obvious and least expensive solution the creation of new access roads and connectors to downtown areas through existing open spaces in the cities — the parks.

Some immediate examples that come to mind are the extension of Route 66 through Hubbard Park in Meriden, Route 25 construction in Bierdsley Park, Bridgeport, the I-84 and I-91 Connectors which bisected Bushnell Park in Hartford, being built partially onto the State Capital lawn. (That portion is now being removed, incidentally, at a cost of several millions to Connecticut taxpayers.) There was also the abortive attempt to run the I-91 Connector through East Rock Park in New Haven. This last was prevented by a Save The Park Committee which eventually persuaded state highway authorities that the connector could feed into an existing street rather than slicing through the park.

Nineteen Seventies and Eighties

Other historic and continuing problems include increasing vandalism, littering and dumping. Two particular examples come to mind here. West Kinney Park in Hartford which has suffered excessive littering as well as damage to the zoo; West Rock Park in New Haven which should become West Rock State Park later this year. (The shift in management from local to state level at West Rock Park is no guarantee, however, that the problems will not continue.)

Part of the problem we face in the eighties comes from overuse of existing facilities. We calculate that cities using the standard of ten acres per thousand residents appear to have adequate park and recreational lands. But a good number of cities in Connecticut fall below this standard. Furthermore, in many of these cities additional open space does not exist, so they will have to rely on presently developed facilities to meet current and future needs. To achieve this, city park and recreation departments need increased funds to cover their costs of operation and maintenance, and funds to develop or rehabilitate their existing facilities.

Shrinking Budgets

A review of the budgetary situation of urban park and recreation agencies since 1970 shows the following developments: Local budgetary support has generally declined; this has resulted in local maintenance forces being laid off. Inflation, (i.e., rising labor, materials and energy costs) has had a major impact on the budgets.

In the parks and recreational areas, therefore, with reduced staff performing reduced maintenance, the effects of vandalism have been cumulative. At the same time these areas are increasingly used because school-sponsored recreation programs have been cut back or eliminated. In an effort to counteract shrinking budgets, cities have been forced to rely on CETA funding to carry the load. This in turn has led to the hiring of unskilled temporary personnel to maintain their park facilities. At best, this has provided minimum maintenance.

The State Department of Environmental Protection Program for Youth, the Youth Conservation Corps and the Young Adult Conservation Corps are now in danger of being cut by Congress. Most of these problems are enumerated in the Statewide Comprehensive Outdoor Recreation Plan completed in 1978.[1]

National Policy Lacking

It is interesting to match these problems against those set out in the National Urban Recreation Study completed in February of 1978 by the Department of the Interior. This study reported the following findings:

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[1] Available from the Planning and Coastal Area Management Unit of the Department of Environmental Protection, State Office Building, Hartford, Connecticut 06115.

—— No overall national policy or strategy exists to meet open space and recreational needs in urban areas.
—— Current federal land protection programs have had little impact on the loss of open space resources near cities. If Land and Water Conservation Fund monies are available to purchase and develop these resources, cities are often unable to afford the fifty percent match necessary to use the federal funds. Neither do they have sufficient funds to acquire land in fee simple.
—— There is still a great deal of open space area existing near cities which has substantial scenic, cultural, environmental, recreational and agricultural value. However, the primary use of that land is largely non-recreational.
—— The land which is already dedicated for recreation is poorly distributed in most urban areas.
—— Half of the areas surveyed had fiscal cutbacks in the six years prior to 1978, further restricting their ability to acquire land for recreational use.
Few (six percent) of the urban areas survey citizens on recreational preferences.
—— There is a net bias against city projects.
—— One-fourth of low income neighborhoods lack play areas.

Strategy For Future

Where problems like those listed above exist, so also do opportunities, and I would like to conclude this address by listing some of the options I believe we have for coping with problems of open space management in our urban centers.

Applicable solutions include:

—— Putting more Land and Water Conservation Fund monies into urban areas, though we know these funds may be decreasing in the future at the national level, and less would be available for other projects of interest to many.
—— Continue to press for funding of CETA, revenue sharing, YCC and YACC programs though there is talk of cutting these programs.
—— Organize local committees to assist park departments and to lobby for additional funds and personnel.
—— Organize other groups such as Friends of Elizabeth Park, Sleeping Giant Park Association, West Rock Ridge Park Association.
—— Seek aid from private foundations such as the Knox Foundation which has helped with the carrousel at Bushnell Park.
—— Encourage donations of plant materials from garden clubs such as the Garden Club of Hartford which provided trees for the street park between Hartford City Hall and the Wadsworth Athenaeum.
—— Make increased use of school recreational facilities when school is not in session.
—— Get open space reserved in redevelopment and renewal which is financed and maintained by the developers.

In looking for ways to exploit the opportunities to acquire new open space and to preserve what we have, it is most important that state and local officials remain flexible. The problems have been long in the making and are cumulative. The solutions are varied. We must continue to explore and to press on every front to preserve and extend a quality environment for our citizens.

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PROBLEMS IN MANAGEMENT OF URBAN OPEN SPACES

William A. Niering

The Connecticut Arboretum at Connecticut College is a four hundred and fifteen-acre tract established in 1931 as a setting for trees and shrubs native to the northeastern United States. In addition to the woody collections, there are two natural areas representing a set of natural ecosystems which include upland forests, field, bogs, swamps and tidal marshes. Here, long-range ecological research on various aspects of the biota has been underway for over two decades.[1] Considerable acreage is also devoted to vegetation management with herbicides and prescribed burning.[2] A demonstration area has also been set aside where one can learn how to manage a typical post-agricultural southern New England woodlot for cordwood production. The Arboretum serves as a park for the local community, a quiet place to walk and relax away from the rush of the surrounding urban environment. Special trails have been designated for horseback riding and jogging. The latter are used not only by our students, but also by U.S. Coast Guard Academy personnel and the community at large.

Multiple Use Focus

Many interest groups must be accommodated in the administration of a private enterprise which is open to the public. Special uses include weddings in the grassy Outdoor Theater overlooking the Arboretum Lake, outings at Buck Lodge, games at the Little League ball field, and guided tours for several thousand students conducted each year by the Thames Science Center which is located within the Arboretum. Adjacent property owners also demand proper maintenance along their boundaries. Use of the Arboretum property by contiguous property owners is also an occasional problem. Recently a property owner called to complain about snapping turtles advancing onto his land from the Arboretum. It would appear, however, that the turtles really came from a private wetland nearby where the owner was excavating for a pond.

As the Arboretum becomes a more conspicuous island of open space within suburbia, increased pressure has resulted. Grass can no longer be maintained on many of the trails. Organic amendments such as wood chips, pine needles and deciduous leaves are now being used to cover bare paths.

As previously mentioned, a special jogging trail was recently designated to reduce the impact of the trails within the woody collections section of the Arboretum. The more heavily-used portions of the area have been fenced in recent years to reduce vandalism and loss of plant material. Organized sports in the Outdoor Theater are also a problem. Rock climbing in the Natural Area ravine and occasional man-set fires are additional impacts. Special fees are charged for weddings and the Little League field will be on town-owned land in the future, not on Arboretum property.

Vegetation Management

As a result of our location within two urbanized communities, numerous rights-of-ways (railroad, telephone, natural gas, electric transmission and town roadsides) cross the Arboretum. We have taken advantage of this situation by establishing a Right-of-Way Vegetation Management Demonstration Area on the transmission right-of-way crossing the Arboretum. This has served as a guide to the sound selective use of herbicides in the vegetation management of such areas.[3] In fact, two Arboretum bulletins have been published on roadside vegetation management.[4]

The recent widening of Gallows Lane, a town road crossing the Arboretum, hopefully will facilitate local travel across the town of Waterford, and not necessitate any additional road construction in the future. A few private, undeveloped properties contiguous to the Arboretum still pose a potential threat in terms of possible high rise apartments or other undesirable visual impacts.

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[1] William A. Niering, "The Arboretum: Research and Recreation," *Connecticut College Alumni Magazine* 54 (Spring 1977): pp. 10-23.

[2] See W.A. Niering and R.H. Goodwin, "Ecological Studies in the Connecticut Arboretum Natural Area. I. Introduction and a Survey of Vegetation Types," *Ecology* 43 (1962): 41-45; Idem, "Energy Conservation on the Home Grounds," *Connecticut Arboretum Bulletin 21* (1975): 28p. Tall Timbers Association, *Proceedings, Annual Tall Timbers Fire Ecology Conference* (1970), pp. 267-286.

[3] W.A. Niering and R.H. Goodwin, "Creating New Landscapes with Herbicides," *Connecticut Arboretum Bulletin* 14 (1963), 30pp: Idem, "Creation of Relatively Stable Shrublands with Herbicides: Arresting 'Succession' on Rights-of-Way and Pastureland," *Ecology* 55, (1974): pp. 784-795.

[4] Idem, "A Roadside Crisis: The Use and Abuse of Herbicides," *Conn. Arb. Bull.* 11 (1959); 13pp; "What's Happening Along Our Roadsides?", *Conn. Arb. Bull.* 13 (1962): 24pp.

Our long-range breeding bird population studies have also resulted in significant findings concerning the impact of increasing urbanization. In 1978 Mr. Gregory Butcher, an undergraduate and now a graduate student at the University of Washington, was the recipient of the Arboretum Summer Fellowship to analyze changes in the breeding bird populations of the Bolleswood Natural Area over the last two decades. Butcher's research revealed that populations of typical forest-breeding birds, such as the red-eyed vireo, have declined during the past twenty years and have been replaced by feeder and suburban birds. The decline in birds which prefer interior forest habitats is associated with increasing urbanization and the loss of natural open space. The concept of island biogeography explains the change. The natural area has increasingly become an island of wilderness within suburbia rather than being connected with other undeveloped natural landscapes. Heavy winter feeding of birds by people may also be involved, although some wildlife biologists feel this effect is insignificant.

In conclusion, we have attempted to minimize environmental impacts in various ways as public use has increased. The Arboretum is continuing to play an increasingly important role in terms of multiple use by the public. It represents a set of natural or semi-natural communities within suburbia. Although further urban impacts on the biota may occur in the future, this by no means lessens the many values and roles. This undeveloped open space is serving at the community, state and biospheric level. The subtle ecological role these natural landscapes play in atmospheric and aquatic pollution filtration cannot be over-emphasized in an era when we are desperately trying to increase environmental quality within the urban setting.

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Directory

ORGANIZATONS THAT WORK TO PRESERVE OPEN AREAS IN CITIES

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Washington, D.C. 20036
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